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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/732,115	12/07/2000	Terrance J. Dishongh	884.357US1	1363

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EXAMINER

DINH, TUAN T

ART UNIT	PAPER NUMBER
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2827

DATE MAILED: 10/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/732,115

Applicant(s)

DISHONGH ET AL.

Examiner

Tuan T Dinh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 June 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) 9-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's election with traverse of Group I (claims 1-8) in Paper No. 5 is acknowledged. The traversal is on the ground(s) that between Group I and III of an office action mailed on 10/15/01, and Group I and II of an office action mailed on 5/31/02. This is not found persuasive because:

the office action mailed on 10/15/01, examiner is described a distinct between Group III and I such as subcombination disclosed as usable together in a single combination, Group I is distinct and has separate utility such as a signal line in a printed circuit board (PCB) not using in a subsystem of group III, and Group III having a plurality of an external electrical components are not using in Group I.

the office action mailed on 5/31/02, examiner is described a distinct between Group II and I as related a combination and subcombination, Group II as a combination does not have a limitation of "said carbon based cladding of signal lines being continuous or discontinuous, and Group I does not require "said cladding providing an finite electrical resistance" of Group II.

The requirement is still deemed proper and is therefore made FINAL. Claims 9-29 are withdrawn from further consideration as being drawn to non-elected subject matter.

Specification

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

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As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.**
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Examiner requests to applicant submit a **"brief summary of the invention."**

Claim Objections

2. Claims 2, 5 are objected to because of the following informalities:

Claims 2, 5, line 1, change "comprising" to --further comprising--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, lines 3-5, it is unclear. The phrase of "said first signal line...at least a portion of its length" is not understood. What does applicant meant of "a portion of its length?" What does "its length" refer to?

5. Claim 5 recites the limitation "said first dielectric board member" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by

Shacklette et al. (U. S. Patent 5,850,498).

As best understood to claim 1, Shacklette discloses a printed circuit board (PCB) as shown in figures 1-6 comprising:

a first dielectric board member (2, column 9, lines 44-47, column 13, line 10); and

a first signal line (1, column 13, line 9) supported on said first dielectric board member (2), said first signal line including a first elongated conducting member that is enshrouded (cover) with a carbon-based cladding (11, column 5, lines 29-50, column 13, line 10) over at least a portion of an elongated conductive member length (see figure 1).

As to claim 2, Shacklette discloses the PCB as shown in figures 1-6 further comprising: a second signal line (core 1 having a plurality of conductors 1) on said first dielectric board member (substrate 2), said second signal line including a second elongated conducting member that is enshrouded with a carbon-based cladding (11) over at least a portion of an elongated conductive member length, said second signal line being adjacent to said first signal line (see figure 1).

As to claim 3, Shacklette discloses the PCB as shown in figure 1a wherein said carbon-based cladding of said second signal line is continuous with said carbon-based cladding of said first signal line.

As to claim 4, Shacklette discloses the PCB as shown in figure 1 wherein said carbon-based cladding of said second signal line is discontinuous with said carbon-based cladding of said first signal line.

As to claim 5, Shacklette discloses the PCB as shown in figures 1-6 further comprising a second dielectric board member (5, column 14, lines 20, 47-55) disposed above said first dielectric board member (2) and said first signal line (1).

As to claims 6-7, Shacklette discloses the PCB as shown in figures 1-6 wherein said first elongated conductive member (1) is fully covered over top, bottom, and side

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portions over greater than 90% with said carbon-based cladding of an outer surface of the first conductive member length.

As to claim 8, Shacklette discloses the PCB as shown in figures 1-6 wherein said carbon-based cladding has a dielectric constant that is greater than a dielectric constant associated with said first dielectric board member (the carbon based cladding having carbon which is less resistive, and a dielectric board has a rigid resistance (made of epoxy or glass...)).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Salensky et al., Knudsen et al., Yang et al., Xu et al., Japp et al., and Morita et al. Disclose related art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan T Dinh whose telephone number is 703-306-5856. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Talbott can be reached on 703-305-9883. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-1341 for regular communications and 703-305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

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TD
September 23, 2002

Albert W. Paladini 9-30-02
ALBERT W. PALADINI
PRIMARY EXAMINER